

IN THE EUROPEAN PATENT OFFICE
PCT RECEIVING OFFICE (RO/EP)

In re Application of: CARDINAL CG COMPANY

Int'l App. No.: PCT/US01/28577

Atty Ref. No.: 440462031604

Int'l Filing Date: 11 September 2001

Title: TEMPORARY PROTECTIVE COVERS

REQUEST FOR RECTIFICATION OF
OBVIOUS ERROR UNDER RULE 91.1(b)

Attention: International Searching Authority
European Patent Office
Branch at The Hague
Patentlaan 2
2288EE Rijswijk
The Netherlands

Pursuant to Rule 91.1(e)(ii), Applicant requests that the European International Searching Authority (ISA/EP) grant Applicant's Request for Rectification of Obvious Error Under Rule 91.1(b). Under Rule of 91.1(e)(ii), this Request is being made within 17 months of the priority date of the application, i.e. prior to 11 February 2002.

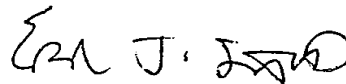
Applicant submits the attached substitute Specification pages 2 and 17 for filing in the above-identified application.

COMMENTS

The differences between the Specification pages as originally filed and as amended are identified on the attached red-line sheets. Deletions are indicated by brackets and additions are indicated by underlining.

The Examining Authority is encouraged to contact the undersigned Agent of Record with any questions or comments regarding this Request for Rectification of Obvious Error.

Respectfully submitted,



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Dated: 25 October 2001

of storage and transport environments before reaching their final destination. Like manufacturing facilities, storage and transport environments may contain residues and vapors that can accumulate on and contaminate the products therein. For example, IG units and other products found in storage and transport environments may contain silicone sealants and other materials that can outgas for substantial periods of time. Of course, many of these environments are outside the manufacturer's control. Thus, while a manufacturer may attempt to control the environment within its own manufacturing and storage facilities, it would be very difficult to regulate each of the environments to which glass may be exposed prior to delivery to the ultimate consumer.

Contamination can also occur when glass products are installed or finished. The contamination that is perhaps most familiar to new homeowners occurs when window frames are painted and some of the paint unintentionally ends up on a window pane. While installers and painters can take steps to temporarily mask the surfaces of nearby glass (e.g., by applying "masking tape"), it can be difficult to mask the entire surface of the glass. Thus, any unmasked surface areas will still be vulnerable to unintentional spills and drips. Moreover, to the extent these tapes are applied with adhesive, it can be difficult to assure that no adhesive residue is left on the glass following removal.

Contamination sources like these can make it exceedingly difficult to manufacture, transport, install, and finish glass and other substrates that are free of surface contamination.

The most obvious solution to this problem would be to simply remove the surface contamination, such as by washing or otherwise cleaning the contaminated surface. For example, various polishing and etching agents have been used to remove paint contamination from window panes. Technicians have even been known to use razorblades to scrape paint and the like off glass. Unfortunately, these aggressive treatments may actually remove some of the glass, leaving dull or scratched areas. Even with aggressive cleaning methods, certain contaminants (e.g., silicone) can be virtually impossible to remove.

Another solution would be to temporarily protect substrates during periods of potential contamination. In the past, attempts have been made to protect glass with removable papers and plastics. Typically, these papers and plastics are removed by mechanically peeling them from the substrate. Reference is made to U.S. patents 1,256,818 (Nile), 5,107,643 (Swensen), and 5,599,422 and 5,866,260 (both to Adams, Jr. et al.), the entire contents of each of which are incorporated herein by reference.

Even when a highly photocatalytic coating is produced, the photocatalytic properties of the coating could be reduced as a result of surface contamination. For example, while photocatalytic surfaces tend to degrade organic contaminants, they typically do not break down inorganic materials. Consequently, photocatalytic windows and the like may be vulnerable to becoming contaminated with inorganic residues. Thus, a particularly advantageous application of the present covers 90 involves their employment in protecting photocatalytic surfaces from becoming contaminated. Thus, by applying the present covers 90 to newly produced photocatalytic coatings, a manufacturer can protect these coatings from becoming contaminated during manufacturing, storage, transport, installation, and finishing.

A variety of photocatalytic coatings can be formed using a variety of deposition processes. For example, useful photocatalytic coatings are described in U.S. patents 5,874,701 (Watanabe et al), 5,853,866 (Watanabe et al), 5,961,843 (Hayakawa et al.), 6,139,803 (Watanabe et al), 6,191,062 (Hayakawa et al.), 5,939,194 (Hashimoto et al.), 6,013,372 (Hayakawa et al.), 6,090,489 (Hayakawa et al.), 6,210,779 (Watanabe et al), 6,165,256 (Hayakawa et al.), 5,616,532 (Heller et al.), 5,849,200 (Hayakawa et al.), and 5,845,169 (Hayakawa et al.), the entire contents of each of which are incorporated herein by reference. A discussion of all known photocatalytic coatings is beyond the scope of the present disclosure, as the present covers 90 are anticipated to be useful in protecting essentially any photocatalytic coating, including photocatalytic coatings not yet discovered. It is anticipated, though, that the most suitable photocatalytic coatings will comprise an inorganic titanium compound, such as an oxide of titanium.

In a particularly advantageous embodiment, the photocatalytic coating comprises a sputtered film of titanium oxide. The titanium oxide can be sputter deposited in several ways. First, targets formed of metallic titanium can be sputtered in oxidizing atmospheres. Unfortunately, this process is quite slow. Second, targets formed of titanium dioxide can be sputtered in inert atmospheres. However, titanium dioxide targets suffer from low electrical conductivity. Hence, they are difficult to stably sputter at high power levels. Therefore, if titanium dioxide targets are used to deposit the present photocatalytic titanium oxide coating, such methods are preferably limited to low power/low deposition rate sputtering processes.

In a preferred method, the present photocatalytic coating is deposited by sputtering substoichiometric titanium oxide targets. These targets are especially preferred since they have high electrical conductivity, allowing them to be sputtered at high rates. Targets of this

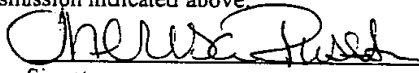
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CERTIFICATE OF FACSIMILE TRANSMISSION

FACSIMILE NO.: 011-31-70-340-3016DATE: 25 October 2001

I hereby certify that this paper, and any papers referred to as attached thereto, are being facsimile transmitted to the International Searching Authority, European Patent Office, Branch at The Hague, on the date indicated above. The original of this document will follow by International Federal Express within ten (10) days of the date of transmission indicated above.

Theresa RUSSEK
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